**Explanation of Inheritance**

Meaning of Inheritance: Inheritance is a core principle of object oriented programing that allow classes (derived or child classes) to directly acquire or inherit the characteristics (attributes and methods) of another class (supper or base class) and make use of them without re-writing those characteristics which make the program more efficient, concise and make the programmer more productive.

Benefit of Inheritance:

1. Code Usability: Applying the principle of inheritance makes code more re-usable as you don’t need to change the body write-up but only need to inherit the class and use the attributes and methods by directly calling them.
2. Maintainability: When there is any need to make changes to the values of a program to which inheritance is applied, you will only need go to the specific class that holds the value you need to change. This saves time and limit errors.

Example of Inheritance:

*public* *class* Activity

{

*private* *string* \_activityName;

*public* Activity(*string* *activityName*)

    {

        \_activityName = *activityName*;

    }

DERIVED CLASS START HERE!

*public* *class* BreathingActivity : Activity

{

*private* *string* \_activityMessage1 = "Breath in...";

*private* *string* \_activityMessage2 = "Now breath out...";

*public* BreathingActivity(*string* *activityName*) : *base*(*activityName*)

    {

    }